**Case 1: Burlington Northern**

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**Case background:**

Burlington Northern Railroad (BN) is a company that was formed in 1970 when four railroads merged together. BN diverse operations and staffs were headquarters in Three Cities; CEO, COO, and corporate functions were located at Worth Texas. Operations departments in Overland Park Kansas and train dispatchers, operators and their supervisors, maintenance and information system services were located in St. Paul Minnesota (Barker).

**Products:**

Burlington Northern focuses on seven segments: coal, agricultural commodities, industrial products, intermodal, forest products, food and consumer products, and automotive products. Coal was BN's the largest source of Revenue representing about one-third of total revenue(Barker).

**Competitors:**

BN's major competition in coal was other railroads especially the Union Pacific (UP) has made a substantial investment on the heavy duty double truck and in new technology, fuel-efficient engines for carrying coal. Even though the primary competitor to railways is trucking because Trucks could carry the same goods as trains. Other transportation methods are competition to BN. This includes airplanes, trucks, and boats. Trucks charge as much as two or three times what would cause rail service. But trucks go door-to-door and people will pay for that level of service. Agricultural commodities mainly grain was BN's second largest. They were number one hauler of spring wheat and number two hauler of corn.

**Business process:**

BN most products are intangible, which is to deliver the merchandise using railroad service so their business process will follow the value shop approach. The first step of analyzing this approach is to find where is the problem. “The main function of a successful business is to make money now, and continue making money in the future” (Goldratt).

**Problems:**

One of the main issues that BN had was the maintenance sometimes they were unable to be performed because of the small window of time dispatchers were able to be certain that there were not any trains coming towards the site. Also dispatchers have control only in their territories which means that they can not see if a train was delayed in other territories, the concern was sending the train further could cause even larger problems and cause more trains to be off schedule. Dispatchers still utilized technology developed 1920's and little change since then. Based on their assumption a good dispatcher can really focus on five to seven trains, where each was responsible for 20 to 30 trains during their shift that means the other trains treated inevitably with less attention. Current information about railroad operations was difficult to obtain.

**Evaluate alternatives:**

* The first alternative is to continue the ARES project. ARES is an automated railroad control system, expected to cost $350 million. ARES is divided into three main parts: Control, Data, and Vehicle. Which should cover all aspects of the railroad and will help make Burlington Northern operate more efficiently. ARES is expected to improve asset utilization while increasing supplier relations; Also ARES will help BN reduce costs. With this option, dispatchers will be able to know the position of trains more accurately and cover more than their territories. Also, the maintenance crew will be able to perform maintenance when necessary with shorter time.
* The second alternative BN have is to wait and do the Advanced Train Control System (ATCS), which was being created by the Association of American Railroads. “ATCS controlled trains. With this alternative, BN might be able to lower the cost and gain a competitive advantage. some managers compare this alternative with the first one and they believed that the ARES system was as many as five years ahead f ATCS in development. With this alternative, BN might be able to lower the cost and gain a competitive advantage. Some managers compare this alternative with the first one and they believed that the ARES system was as many as five years ahead f ATCS in development. Also, managers were worried about the implementation the system applications of the projects based on their experience with the Canadian Pacific railroad, which was supposed to take one year, but took four years. Employees will need training on the new system.
* The last alternative is to do nothing and continue operations normally. Burlington Northern management should consider this option. To do nothing and continue running the business as they do it. The risk they facing with this alternative is to fall behind other completers because of the technology advantage especially that they are having issues with the current system. However, based on the final data BN $350 million considered a huge investment.

**Choose from alternatives:**

I believe that the best alternative to implement is the first alternative continues the ARES project. “Dialectical analysis thus shows us that the management of organization, of society, and of personal life ultimately involves the management of contradiction” (Morgan).

**Execution of the choice:**

Based on the alternatives Burlington Northern this alternative will be the best action

**Control and execution:**

BN will have to control the process of implementing the project and evaluate each step. By scheduling fixed points of time to evaluate the project and calculate the cost of each stage they will be able to decide to continue the project or to evaluate the alternative again based on the new data.

**Solution:**

Since BN already started the system and they have high expectation for ARES to solve the current issues and provide a more efficient way. In addition, the ARES system gives suppliers more detailed information about trains.

**Citation:**

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Goldratt, Eliyahu- “The Goal”.

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